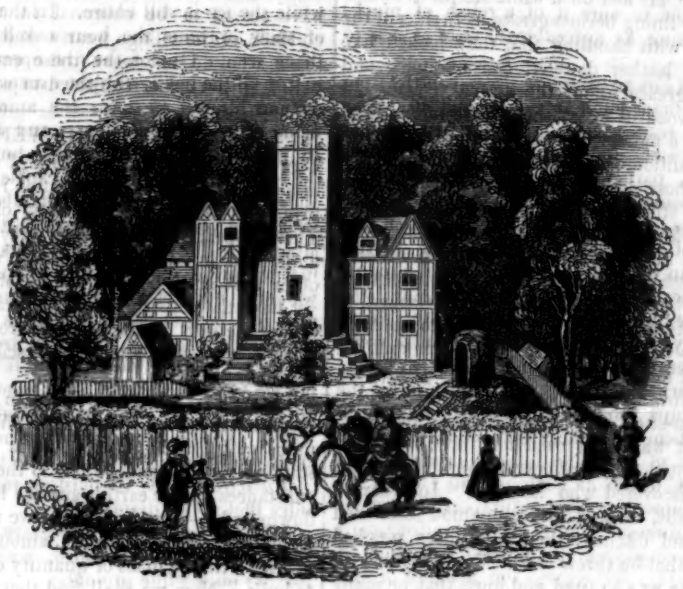
THE PENNY MAGAZINE

OF THE

Society for the Diffusion of Useful Knowledge.

522.] PUBLISHED EVERY SATURDAY. [MAY 23, 1840.

CHARLES II. AT BOSCOBEL HOUSE.



[Boscobel House.]

BOSCOBEL House, situated in the parish of Donnington in Shropshire, is identified with an event in English history which has become better known and has struck deeper into the popular mind than almost any other, if we except perhaps the Gunpowder Plot. By supposing for a moment the most stirring political question of the present day invested with a tenfold interest, we shall scarcely form an adequate idea of the powerful feelings which entered into the contests that divided the country into two hostile parties in the reign of Charles I. The excited state of England between thirty and forty years ago, when an invasion was anticipated, may be compared to the times of Charles I., though wanting the interest and variety of incidents by which they were characterised. At one period Boscobel was the resort of Royalist pilgrims, and the loyalty of many a gallant cavalier has been warmed by the historical recollections associated with the place. These events we shall briefly detail.

After the execution of Charles I. in January, 1649, his eldest son, then about twenty years of age, who was then at the Hague, took the title of Charles II., and in June, 1650, he landed in Scotland, for the purpose of fighting his way to the throne. He was crowned at Scone on the 1st of January, 1651, and, marching into England with an army which he had collected, was proclaimed king at Carlisle. The young king received little encouragement on his route from the gentry of his own party, whom Cromwell's vigorous system had sufficiently overawed; and the spirit of the Royalist army was not animated with that ardent loyalty and devotion which braves every discouragement and grows warmer in adversity: its discipline was also in a neglected state. Charles was therefore in reality but ill prepared to meet his redoubtable opponent, and at Worcester, where the Royalist army had taken up their quarters, Cromwell, whose coming they had foreseen, but never provided against, rushed into the city as to a prey. He commanded his troops to fall on in all places at once, seeming to think it needless, against so ill-ordered an enemy, to trouble himself by delay or circumspection. On the king's side all was confusion—there were few to command, none to obey; and so sudden and complete was the route, that Charles was compelled to join in the flight, lest he should be borne down by his own friends.

The following account of what afterwards befel Charles is principally taken from the story which Lord Clarendon says that he heard from the king's own lips:—The king remained until night with General Lesley and about 4000 horse which had kept together in their retreat; but foreseeing the difficulty that there would be in marching this ill-disciplined army back into Scotland, he left it at night with two of his servants, whom he dismissed at day-break, after he had made them cut off his hair. Charles then concealed himself in a wood on the borders of Staffordshire, called Boscobel, where he lay down and slept soundly. When he roused himself, there came to him a gentleman of the name of Careless, who had also fled from the king's army, and had concealed himself in an oak near the spot where Charles had been sleeping. By this gentleman's advice and help, the king climbed into the oak, and then helped his companion to mount after him. They remained in that tree the whole day, during which they saw many persons who were searching for the king, and talked, in his hearing, of how they would use him if they could take him.

During the whole of this day the king was without food, of which he had scarcely eaten any the day of Cromwell's attack, and it was two nights since he had taken any rest, excepting his short sleep in the wood. At nightfall, therefore, he and Captain Careless came down

from the tree, and went to the cottage of a poor man, who took the king to a little barn full of hay. Careless now left him, and Charles fell soundly asleep until the poor man brought him some bread and buttermilk, which he thought the best food he had ever eaten. Here he remained two days and two nights, his only food being bread and buttermilk. On the third night the king, under the leading of a strange guide sent by Careless, set out for another cottage twelve miles off, having changed his clothes, even to the shirt, for those his poor landlord was wearing. This dress is thus described in a scarce tract of that period: "He had on a white steeple-crowned hat, without any other lining besides grease, both sides of the brim so doubled up with handling that they looked like two waterspouts; a leather doublet, full of holes and almost black with grease about the sleeves, collar, and waist; an old green woodriff* coat, threadbare and patched in most places, with a pair of breeches of the same cloth, and in the same condition, the slops hanging down to the middle of the leg; hose and shoes of different parishes; the hose were grey stirrups, much darned and clouted, especially about the knees, under which he had a pair of flannel stockings of his own, the tops of them cut off; his shoes had been cobbled, being pieced both on the soles and seams, and the upper leathers so cut and slashed, to fit them to his feet, that they were quite unfit to befriend him either from the water or dirt." This exotic and deformed dress, added to his short hair cut off by the ears, his face coloured brown with walnut-tree leaves, and a rough, crooked thorn-stick in his hand, had so metamorphosed him, that it was hard even for those who had before been acquainted with his person and conversant with him to have discovered who he was.† In order to avoid the high roads, he and his companion traversed fields and hedges and ditches: the king's shoes pinched him so intolerably, that he threw them off and walked in his stockings, and he was so tired and hurt, that he many times cast himself on the ground, preferring the risk of being taken and suffered to rest, to the purchase of his safety by such misery. Nevertheless he reached the cottage, where again he remained in a barn full of straw.

Thus did the king pass from one poor man's house to another, ill fed, clothed in rags, and miserably lodged, until at length he was conducted by a Catholic priest to the house of Mr. Lane, a magistrate, in Staffordshire. Here he remained in comfort long enough to recover from his fatigue; but a reward had been offered by the parliament to any one who would deliver him up, and it was certain that he could not be secure in England. It was therefore determined that Miss Lane, a daughter of his landlord, should ride behind him on horseback to Bristol, where she should pay a visit to Mrs. Norton, her relation. This journey they effected about the middle of October; they slept each night at the house of some friend, on whose discretion they could rely, and Miss Lane pretended that the king was a neighbour's son, who had been sent to ride with her in order that he might recover from an ague. She called him William, and his supposed illness was a pretext for his going to his chamber as soon as he arrived at the house where he was to lodge for the night. After spending a few days at Mr. Norton's, the king made his way (accompanied by Lord Wilmot, afterwards Earl of Rochester) to the neighbourhood of Lyme, in Dorsetshire, where a ship was hired to convey him to France. On the night, however, fixed for his sailing, the captain was prevented from embarking by the importunities of his wife, and Charles had but just time to escape before the inn was searched for him; suspicion having been excited by a smith, who accidentally examined his horse's feet, and said that he was sure the horse must have travelled far, as his four shoes had been made in four different counties. At last, after wandering through Dorsetshire, Wiltshire, Hampshire, and Sussex, Charles embarked, in the month of November, at Brighton, and reached Fecamp, on the coast of Normandy, in safety.

Nearly ten years elapsed before the Restoration took place; the 29th of May, 1660, being the date of this event. This was also the king's birth-day, and it was long regarded as a festival throughout England, and commemorated by the display of oak branches and sprigs of oak worn in some part of the dress. To this day, in many districts where old customs linger long after they have ceased to be observed in towns, the boys and children of the village wear oak leaves in their hats, and those who do not wear these emblems of the day are pelted with eggs or subjected to some rough usage.

* Woodreeve's, or Woodman's.

† Sir Walter Scott's Illustrations to 'Woodstock.'

SCALES AND WEIGHTS.—I.

The weighing of any quantity of a saleable commodity in a pair of scales is an operation resting on more curious principles than the generality of purchasers suppose. There appears to be nothing very remarkable in putting a piece of brass or iron in one scale, and loading the other with an equivalent weight of the article to be sold; yet have the construction of the scales, and the determination of the size of the brass or iron weights, occupied no small share of the attention of scientific men, and also of the legislature.

In the first place, we have to bear in mind what we mean by the word "weight." Weight is nearly synonymous with *gravity*, that is, it is the force with which a stationary body tends to fall to the earth. We know that substances on the earth's surface have a tendency to press downwards,—by which word we mean, towards the centre of the earth,—and the amount of this pressure increases with the mass or quantity of matter, without regard to bulk. Now we shall find that what we call *weight* is nothing more nor less than this downward pressure: if we hold a brass pound weight on the palm of the hand, the force of gravity tends to carry it downwards, as usual, but the hand is in the way, and the weight cannot descend; it nevertheless shows its power by *pressing* on the palm of the hand, and the amount of that pressure we choose to call by the name of a "pound." Weight is therefore a pressure, resulting from gravity.

It is found that bodies having equal weights are often of unequal bulk; and this is one of the reasons why weighing-scales are necessary. If we take a cubic inch of iron, and a cubic inch of cork, it is found that one is about thirty times the weight of the other, owing to the difference in the amount of porosity or vacant space in the two, whether we can detect this difference by the eye or not: this therefore shows that mere *measuring* will not give us a comparison between the quantity of substance in two bodies; and it has been a custom among most civilised nations, to have certain pieces of metal, not liable to much change of bulk by temperature, &c., which shall constitute *weights*, and that the majority of articles of commerce shall be bought and sold in quantities regulated by those weights as a standard.

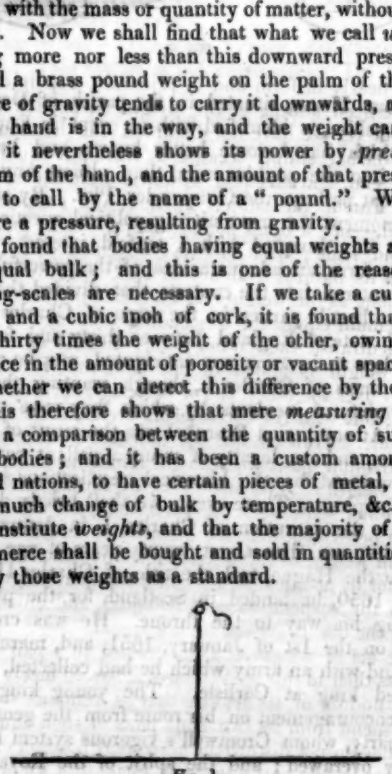


Fig. 1.

The next point to determine is, how are we to ascertain that two quantities of different substances have precisely the same weight? If I agree to give five shillings for a pound of tea, how am I to know when the quantity of tea, consisting as it does of small pieces, is as heavy as

the brass pound weight with which it is compared? There are different ways of doing this; but the one that has been found most convenient is by the employment of a lever, and by an observance of a particular property of the lever. If a straight iron bar, of equal thickness throughout, be suspended in the middle by a cord, as in the preceding figure, it will remain perfectly horizontal; for supposing either end to tend downwards, in accordance with gravity, the other end must necessarily be thrust upwards, in opposition to gravity: the two ends therefore counterbalance each other, and the bar remains horizontal. Now it is important to remark, that if equal weights be attached to the two extremities of the bar, they will not disturb its horizontal position, because neither end could descend without the other end ascending in opposition to the force of gravity. Let us suppose, then, that we attach equal weights to the two ends, and let these weights consist each of a shallow pan suspended from the bar by three equal strings, as in *fig.* 2: we have now ob-

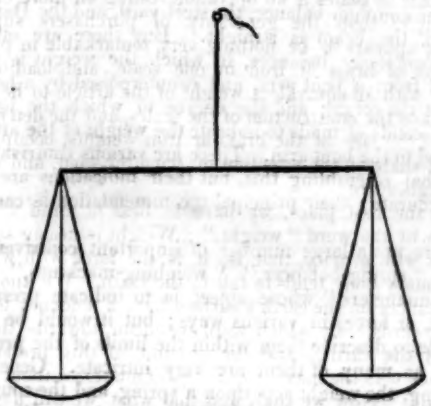


Fig. 2.

tained, nearly in form and in principle, a pair of scales: we have been adding to the weight suspended from the cord, but yet we have not disturbed the horizontal position of the bar, simply because we have put equal weights at each end, and at equal distances from the suspending cord. Pursue the subject further, and suppose a piece of metal,—say a brass pound weight,—to be put into the left hand scale; what follows?—Neither end of the bar has lost its natural tendency to sink towards the earth, but so long as the weights on each side of the suspending cord remain equal, the descending tendency of the two ends neutralise each other; but directly an additional pound weight is added to one side, that side obtains a mastery over the other, and it descends, not with its whole weight, but with the excess of its weight over that of the other side. How is the bar now to be brought back to its horizontal position, without removing the preponderating weight? The answer is, by adding to the weight in the other scale until the horizontality is attained; and it must be evident that the quantity so added is precisely equal in weight to the brass pound put into the left hand scale, for by no other means could the total weight on each side of the suspending cord be equal, and unless it were equal, the bar could not be horizontal.

The act of weighing a commodity in a pair of scales consists then in this:—We have a bar so nicely balanced in the middle of its length, that it remains horizontal: we suspend from its two ends pans of such equal weight that they do not disturb the horizontal position of the bar: we place in one pan a piece of metal of a known weight, by which the bar is thrown out of the horizontal position; and we then put such a quantity of the commodity into the other scale, as to restore the bar to its former position; and we rightly infer that the quantity so put in exactly equals in weight the piece of metal placed in the other scale. This piece of metal we therefore call a 'weight,' because it is a representative of the weight of the commodity put into the other scale: it is thus seen that in our commercial dealings we act on this principle, that two quantities which will produce similar effects on the end of a balance lever, we infer to be equal in weight. We say nothing here of the "turn of the scale," or the "tolerance en plus," as the French term it; this is a custom in weighing that has grown up we know not how, but it has nothing to do with the principle of the balance.

Such is the principle of a common pair of scales, and that such an instrument, or one bearing a resemblance to to it, has been in use from very early ages, we have abundance of evidence, both from the Bible and from other sources. Whether a balance with equal arms, or a contrivance similar to the *steel-yard* (of which we shall presently speak), were the earliest known, it would be now difficult to say.

In our illustration of the principle of the balance, we have purposely treated the matter in its simplest form; but in practice, there are many points of nicety to be attended to. Instead of being suspended by a string, the beam or bar is generally perforated in its centre, and turns on a knife-edge pivot; that is, in order to lessen friction as much as possible, the beam is frequently supported by nothing but a keen edge in contact with a polished plate of steel, agate, or crystal; for common commercial purposes, however, this nicety of adjustment is not required. There is also attention necessary to the position of the centre of gravity of the bar, with reference to the point of suspension: there is a point in every body called the centre of gravity, which is so far a central one, that all the matter above it exactly equals in weight that below it,—the weight on one side of it equals the weight on the other, and so on. Now it is found, that in order that a balance should have at the same time sensibility and stability, the centre of gravity of the bar or beam must be immediately *under* the axis or centre of motion, for if it coincided with that axis, the beam would remain indifferently in any position; and if it were above the axis, the beam would have a tendency to upset.

The mode by which the horizontality of the beam is determined is this: there is a little tongue or index projecting vertically from the beam, and this tongue, in common scales, passes through a slit in the piece of metal from which the beam is suspended; and when the tongue and this piece of metal are in the same plane, the tongue is conceived to be vertical, and the beam horizontal. In the balances constructed for scientific purposes, where the indications are measured with a greater degree of nicety, an index is sometimes fixed at each end of the beam, and near it is a graduated arc, by which it can easily be determined when the beam is horizontal: there are also other modes by which the horizontal position may be determined.

We have said that the stability of a balance depends on a certain position of the axis of motion. If this stability be maintained, the sensibility, or power of turning either way, will be greater as the length of the beam is greater, or as its weight is less, or as the load is smaller, or as the distance between the centres of gravity and of motion decreases. It has been the object therefore, in constructing scientific balances, to attend to all these particulars, and there have been produced balances whose sensibility was very remarkable. In one made by Fortin, when there was a certain weight in each scale, an addition of one-millionth part of this weight to one scale caused it to turn. Another, made by Ramsden for the Royal Society, gave still more remarkable indications: although weighing ten pounds, it was capable of being turned by one-thousandth of a grain being put into one scale, or one ten-millionth part of its own weight! It is found necessary to keep such delicate instruments as these enclosed in glass cases, as both currents of air and dust are liable to derange them.

Scales used for commercial purposes are frequently supported from beneath, instead of suspended from above. These are very convenient on account of the small space which they occupy; and although there does not appear, to a common observer, to be anything equivalent to a *beam* in them, yet they act nearly on the same principle as the suspended balance; there is a pivot beneath, and when the scales are empty, the weight of all the mechanism on one side of the pivot is just the same as on the other, so that the loading of the scales may proceed in the same manner as on any other construction.

In the balances which we have been considering, the length of the beam is divided precisely in the middle, so that the two arms are of equal length, and the beam remains horizontal only so long as there are equal weights in the two scales. But through a particular property in the lever, a balance with arms of unequal length may be employed, by a peculiar adjustment of the weight. When we say that if unequal weights be suspended from the two ends of a horizontal beam, the horizontal position is not disturbed, it is understood that the weights are to be at *equal distances* from the pivot, or axis round which the beam turns; if one weight be placed nearer to the pivot than the other, the beam will immediately change its position and become inclined, that end being lowest of which the weight is farthest from the pivot. From this it results, that if one of the weights be hung nearer to the fulcrum or pivot than the other, the weight must be larger in order that the beam may remain horizontal; and mathematicians are enabled to prove that the beam will remain horizontal, when the weight at the right hand, multiplied by its horizontal distance from the pivot, is equal to the weight at the left hand multiplied by its distance; or, in the language of proportion, the distance varies inversely as the weight.

Such a balance as we have just been considering, is the *steel-yard*, represented in *fig.* 3. This, we believe, was

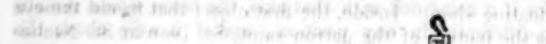


Fig. 3.

the form of the Roman balance, and has probably been used by various nations. There is, suspended from the ceiling or any other convenient place, a vertical piece of metal, through an opening in which a beam or bar may pass. The bar rests on a knife-edged fulcrum or pivot, so as to turn with great ease. One end of the bar is thinner and smaller than the other, so that in order that the bar may remain horizontal, the pivot must be nearer to the large than to the small end. Suppose now that a weight be attached to the shorter arm: the longer arm would evidently be carried upwards, unless a counterbalancing weight be attached to it. This is of course done; and it is a peculiarity in the steel-yard, as compared with the common balance, that *one* counterpoise is made equivalent to many different weights. The counterpoise is attached to the long arm so as to be able to slide along it, and in proportion as the weight attached to the small arm is heavy, so must the counterpoise be removed farther from the pivot. We have stated the relation that must exist between the weights and the lengths of the arms, in order that the beam may be parallel; and as, in the steel-yard, the counterpoise remains constant on the one side, and the distance of the weight remains constant on the other, it may be easily seen that the distance of the counterpoise from the pivot must be increased just in the same proportion as the weight of the body to be weighed. From this principle the long arm is graduated, with figures 1, 2, 3, 4, &c., which figures may represent ounces or pounds, according to the size and delicacy of the instrument. If then a weight be suspended from the small arm, and the beam be retained horizontal when the counterpoise is at 5, and if the weight be increased until, to preserve the horizontal position, the counterpoise must be at 7, the second weight will be greater than the former in the proportion of 7 to 5.

There is a balance called the Danish balance, and used in commercial matters in the countries near the Baltic, which differs from the steel-yard in this, that the counterpoise is fixed and the pivot moveable, whereas in the steel-yard the pivot is fixed and the counterpoise moveable. The beam is graduated in a contrary direction to that of the steel-yard, in order to adapt it to this change; and the beam has to be slid forwards or backwards according to the weight to be counterpoised.

In the common balance, the steel-yard, and the Danish balance, the beam is straight. But there are others called *bent-lever* balances, in which the weight is suspended from a bent arm, and counterpoised by a heavy knob at the other; and the degree to which the heavy knob ascends is made to indicate the weight of the article attached to the bent arm. There are various contrivances somewhat resembling this, but their indications are not very accurate; their principal recommendation is ease in using.

There are a large number of important contrivances, called "spring-balances," "weighing-machines," and "dynamometers," whose object is to indicate pressure, weight, or force, in various ways; but it would be impossible to describe them within the limits of the present paper, as many of them are very intricate. Generally speaking, the weight acts upon a spring, and the counterpoise carries an index hand round a dial-plate. We have purposely confined ourselves to those forms of weighing-machines more or less resembling a common pair of scales; and we may here remark, that the reader would derive instruction from noticing the modes of action of the numerous "letter-balances" that have been devised since the introduction of the penny postage: the common balance, the steel-yard, the Danish balance, the bent-lever balance, and the spring-balance, under a great variety of forms, have been employed for this purpose, some of them with very great ingenuity.

In speaking of the common scales, we have said nothing of the nature of the weights employed: the curious details connected with that subject will occupy a separate paper.

Rich and Poor.—The labouring people are only poor, because they are numerous. Numbers in their nature imply poverty. In a fair distribution among a vast multitude, none can have much. That class of dependent pensioners called the rich is so extremely small, that if all their throats were cut, and a distribution made of all they consume in a year, it would not give a bit of bread and cheese for one night's supper to those who labour, and who in reality feed both the pensioners and themselves. But the throats of the rich ought not to be cut, nor their magazines plundered; because, in their persons they are trustees for those who labour, and their hoards are the banking-houses of these latter. Whether they mean it or not, they do, in effect, execute their trust—some with more, some with less fidelity and judgment. But on the whole, the duty is performed, and everything returns, deducting some very trifling commission and discount, to the place from whence it arose. When the poor rise to destroy the rich, they act as wisely for their own purposes as when they burn mills, and throw corn into the river, to make bread cheap.—*Burke's Thoughts and Details on Scarcity.*

THE MARKETS OF ST. PETERSBURG.

[From a Correspondent.]

[Fish-Bark of St. Petersburg.]

The engraving above represents one of the fish-barks of St. Petersburg,—those floating fishmongers' shops in which are bought and sold all the fish consumed in the capital during the summer. This ark is surrounded by numerous floating cisterns and boats, either pierced with small holes to admit the clear waters of the Neva, or filled with salt water for the natives of the sea. This is, as I have said, only during the brief and concentrated summer season; for in winter, food of all sorts—fish, flesh, and fowl, are as if petrified, and handled and clapped together like fragments of hard leather, or those wooden joints the London ironmongers hang on their bottle-jacks in the windows just to keep them revolving. I have oftentimes at table hesitated between fish from Archangel and Astrachan, until the appearance of the produce of Lake Ilmen or the Volga decided my choice. In the summer then, about eight or nine o'clock in the morning, the housewife begins her marketing for fish, dressed in a loose gown and shawl, without boddice, and corsetless, with a handkerchief bound round her head, although she may be the wife of a merchant and her full dress may be satin and gold tissue, while her daughters may parade on the palace quay in all the pomp of the last Parisian mode. She is attended by a dvornick, a sort of servant used for any purpose, to chop wood, fetch water (remember, there is no water laid on from pipes), and light the stoves: he is provided with a basket of interwoven chips of wood, and he looks the very personification of dull stupidity in his coarse full coat of frieze, enveloping a coarse blue or red striped shirt, the skirts of which hang pendent outside his linen drawers—his brawny neck open, and chin abundantly hairy—his thick leather gloves, made like a hedger-and-ditcher's, without fingers, an indispensable article with the Russ, from necessity in winter and from habit in summer—while a cap at one extremity, and a pair of hard brown immense boots at the other, complete his costume.

The economical matron carefully steps along the railed plank conducting her from the granite-lined quay to the floating shop. Inside, the first object that meets the eye is the picture of the patron saint, St. Ivan or St. Nicholas most likely, with an ever-burning lamp before him. Having reverently crossed herself, and replied to the obsequious bow of the pious fishmonger, who stands cap in hand before her, with the morning salutation of "Zdrastvonitee, bratt" (Good morning, brother), she applies herself to business, and he conducts her down the sloping plank to his reservoirs of fish, and dips out with a small landing-net whatever she makes choice of, returning them to their element if not approved, until, being satisfied, the fish are weighed, and, with much altercation and hard bargaining, the roubles are disbursed and the dvornick laden. The price is then calculated on the *Stchoti*, a small wooden frame strung with wires, on which slide small ivory balls, like the ancient abacus, the first wire being for kopecks, of which 100 go to the rouble, the next for units, then tens of roubles, and so on, without which machine no sort of calculation in shop, counting-house, or bank is ever made, and really with surprising accuracy and rapidity, in complicated amounts involving the four rules of arithmetic.

A few random records of the markets for other provisions may not be unacceptable. About half-way up the Nevskoi Prospeckt, on the right-hand side, is what is called "The Shops,"—the *Gostinnoï Dvor*. They consist of a huge quadrangle, about the size of Lincoln's Inn Fields, of small shops built under a continuous arched piazza, which runs all round, with a similar covered way above it forming an upper story, and to which you ascend by flights of steps at intervals. This upper range is devoted to the sale of furs and skins and cloth clothes, and beneath is the great emporium for nearly everything that money can buy. For the most part the shops are open in front, the owner sitting behind the counter drinking tea out of a tumbler, without milk, but with a slice of lemon in it, or else, when he is

not inviting the passer by to try his wares, he is playing a game of draughts with his next-door neighbour. No fire or candle is permitted in this huge bazaar, and it is therefore closed by dusk. The various trades are classed together—here a group of shoemakers, dealers in glass and china—there linendrapers, and sellers of pipes, and pictures and books, and so on. No name or label indicating the calling of the owner, save a painting on the shutters, blazoning forth in bright colours effigies of the wares within—shawls, hats, ribbons, or shoes, daintily designed and grouped after nature. The interior of this quadrangle is like a caravansary, filled with outhouses, carts, beasts of burthen, and empty packages. Adjoining this is an irregular low mass of buildings called the *Tolkoutchoï Rynok*, in English the "Push Market," indicative of the pushing and shoving necessary to penetrate it. Here all the manufactures or natural productions of the earth that were not in the other market are to be found. Ranges of shops for furniture, ironmongery, and other goods gradually descend into Rag Fair and Monmouth Street,—second-hand clothes of all sorts, old furniture, leather gloves and the worsted ones worn inside of them, old books, pipe-tubes and tobacco-pouches,—those huge hard leather boots and those convex cloth caps that every moujik (boor) wears—these last being mostly vended on stalls in the open air, or heaped on the ground in rows intersected by boarded passages, for the multitude that frequents this place, a medley mass of Jews, Armenians, Tartars, Greeks, Calmucks, Muscovites (your true Muscovite is as different from the adulterated Petersburgian as your Londoner is from the Gael). Here the glass case of the money-changer tells you where you can change paper for silver money—blue notes for five roubles (4*s*. 4*d*.) and red notes for ten roubles (8*s*. 8*d*.) being much more abundant than silver, gold, or platina coin. There an open stall supplies you a glass of *kvass* with a lump of ice in it, deliciously cool, for two kopecks (ten being equal to a penny), and a goodly drink it is, a pleasant vegetable acid, like well made barley-water with lemon-juice; or still better, a tumbler of effervescing *kististchee;* or a man serves you, from a brazen urn enveloped in flannel, a glass of warm *sbiten*, which is a hot liquor made of honey and spices, with a sprinkle of ground pimento; while another from a glass jar dispenses *klukva*, or cranberry-juice; or a dealer in gingerbread, made of brown paper, straw, and coarse rye flour, invites your attention, till he is interrupted by another clamorous in praise of his *pastelar*, a compound, by no means despicable, of honey and pulp of apples. But that quiet-looking man in a ragged apron, with a tray before him, waits patiently till the moujik comes to buy of his hard mahogany-looking *horse-flesh*, with a slice of black bread and salt, or a hard-boiled egg, for his frugal dinner. This scene is yet more enlivened with the cries of the itinerant dealers in rudely executed prints coloured in red and yellow, and sellers of slippers from Cazan, or schlaf-rocks* from Tartary of shawl patterns, or that twisted sort of cake called cringles from Moscow, or the barterers for money of ikonas, pictures of their saints which they must not sell downright;—those noises and yells, added to the shrill treble of the women quarrelling about prices, and the hoarse bawls of the stall proprietors recommending their goods as follows, make as full a picture of the Tolkoutchoï Rynok as we can sketch:—"*Kharosho tchai*" (excellent tea): here at least they are right, for I never tasted such fine-flavoured tea as you buy for ten roubles a pound, transported overland. "*Precrasnie sapagee*" (capital boots), that is, until you begin to wear them. "*Sami louchie vino zdes*" (the very best wine).

I went to one stall (a bookseller's) to carry away some memorial of my visit. I was immediately recognised as an Englishman, and the owner, as the most acceptable book, produced an old volume of the 'Gentleman's Magazine,' about sixty years old. Curious to know how highly Sylvanus Urban was rated here, I asked his price. "*Dvatsat roubleï*," he promptly answered—only twenty roubles! I offered him half a rouble; he saw I was in earnest. "*Karasho, izvolté*" (very well, if you please).

Disentangling yourself from these, a cool vista before you presents fruits and vegetables piled up on both sides, fragrant in smell and pleasant to the eye; this is the Fruit Market, *Ovoschnoï Rynok*. Fruits from the Ukraine, apples from the Crimea, grapes from Astrachan, abundance of oranges and lemons, fresh cranberries, water-melons, and raspberries, form a pleasing contrast to the humanity in a state of fermentation you have just left; all except the tubs of putrefying mushrooms and the sour cabbage (*Schtschi*), great favourites and delicate cates to the Russ. About fifty species of mushrooms are eaten with impunity, and not above three or four reckoned as *paganie*, or poisonous. Then there is the salted cucumber—small thick yellow cucumbers—how exquisitely cool and beautifully sapid!—a vegetable lemon ice.

There is yet another arcade, called *Moscotilnoï Riad*, for the sale of drugs and spices, and all sorts of roots, and seeds, and barks, and twigs, and flowers; and another, which is the Bird Market—birds of every description, alive and dead, and, *inter aliâ*, the Rapscha, or white-fleshed partridge, owls and hawks tied by the leg, and small birds hung up in little red cages, and invariably a large black cat, attending his master with mock affection, and, when his broad seamless back is turned, manifesting it by embezzling a young bird from his museum. "Why don't you kill that cat?" I asked of one of these chapmen. "*Stcho dielitt?*" (what's to be done?) the eternal reply of the resigned Russ: "It would be unlucky." So he quietly continued his occupation, which was taking a mouthful of water and squirting and sputtering it over some green herbs to refresh them: these herbs will stuff his geese and turkeys! Pigeons are the only birds you will not see exposed for sale, but which you cannot help seeing alighting in flocks in every street, and lazily hop away from your feet; while bigotry forbids even cooks to dress them for your profanely watering mouth, simply because the pigeon (*quasi* dove) is the emblem and type of the Holy Spirit: thus all Petersburg is a vast pigeonry of uneaten pouters and fantails, and they die their natural deaths whenever they choose.

Morning gowns.

THE VALLEYS OF THE TEES AND THE TYNE.

[From a Correspondent.]

These valleys comprehend two of the most extensive, fertile, and beautiful districts of country probably anywhere to be met with in the six northern counties of England; and although they are here classed under the same head, they have no other affinity or connection with each other, excepting that the head-waters of several of the principal branches of them both have their origin in that extensive mountain-range which bounds Yorkshire to the westward,—afterwards separates that county from Westmoreland,—then Durham and Northumberland from Westmoreland and Cumberland,—and afterwards branches off into some of the south-eastern counties of Scotland, and gives birth to the Tweed, the Teviot, and other fair streams over the Border. Both these valleys are named after the respective rivers that water them throughout their whole length; and notwithstanding there being an intermediate valley betwixt them, namely, Weardale, which is watered by the river Wear,—this river certainly does not flow through so fine, fertile, and picturesque a region as either of the other two, and consequently is an object of less general interest. It must

be admitted, however, that the scenery on the Wear in some particular places, and among them that in the immediate vicinity of the ancient city of Durham, is scarcely, if at all, exceeded in interest and beauty by anything connected with either the Tees or the Tyne; while the port of Sunderland near its mouth (including Bishop and Monk Wearmouth) has become a large and important borough, possessing a valuable trade both coastwise and foreign, in addition to the vast quantities of coals brought down from the interior of the country by sundry railways for shipment; and the famous iron bridge thrown across the river at this town by the late Mr. Burden, at an elevation so great that tall-masted ships sail under it with ease, for many years after its erection was considered the wonder of the North, for *then* it certainly had no rival within the limits of the United Kingdom of Great Britain.

The river Tees has its source in that section of the mountainous range of country, already alluded to, lying between Westmoreland and Cumberland, and the county palatine of Durham; and scarcely a more bleak and barren region is to be found in England than that where one of its infant branches, although not yet dignified with the name Tees, serves as the boundary-line betwixt small portions of Cumberland and Durham; although these mountains are so wild and desolate, that in some situations the limits of the adjoining counties are disputed, or not known at all. These streams, in the provincial language of the country, are called "becks;" but when we approach the Tyne they receive the Scottish appellative, and are called "burns." After several of these mountain brooks have united, and something near thirty miles (following the course of the river) in a north-westerly direction from Bernard Castle, the Tees receives its name, and from thence to the sea forms the boundary between Durham and the North and East Ridings of Yorkshire. The valley that it first waters, until it reaches the point where it leaves the lower range of hills near the ancient walls of Bernard Castle, is called Teesdale; but shortly after it has escaped from its pent-up course, it enters a fine champaign country, when it is no longer called a dale or valley, but the Vale of the Tees. Teesdale, however, must not be passed over with so slight a notice, for there is not a more picturesque valley in the range of mountains to which it belongs. It contains, however, no towns of any note; Romaldkirk, on the Yorkshire side, and Middleton-in-Teesdale on the Durham side, are the principal villages found in it. But as there is no road or thoroughfare of any note through this valley, few individuals, except those who go in search of the picturesque,, are induced to travel by the roads leading through these hilly districts. The road, however, from Bernard Castle up this valley, affords a variety of beautiful views—some of them grand and romantic; for from various points, rocks, wood, and water present themselves to the admiring traveller in combinations, so as to form many agreeable and some truly sublime pictures. But the wonder of the whole valley is the *Force*, or Fall of the Tees, which has not its equal in the vast range of mountainous country already spoken of; a short description of which, taken from the pages of a tourist who visited these scenes—that still remain unchanged, several years ago, will show the vivid impression they made upon the astonished beholder. "Upon reaching the banks of the Tees where it pours down the rocks, steeps clad with wood prevent you from seeing it, but the roar is prodigious. Making use of our hands, as well as feet, and descending almost like parrots, we crawled from rock to rock, and reached from bough to bough, till we got to the bottom under the noble fall. Noble indeed! for the whole river (no trifling one) divided by a single rock into two vast torrents, is poured down a perpendicular precipice of near fourscore feet! The deluging force of the water throws up such a foam and misty rain, that the sun rarely shines without a large and brilliant rainbow appearing. The whole scene is gloriously romantic, for on every side it is walled in by pendent rock one hundred feet high,—here projecting in threatening cliffs,—and there covered with hanging woods, whose only nourishment one would imagine was derived from the descending spray." . . . "The eighteen miles from Bernard Castle to the Fall of the Tees richly merits the epithet delightful; I never yet travelled such a line of country so astonishingly fine, and containing such a noble variety. It is a continued landscape, sufficient to captivate the most languid observer: a glorious range of bleak mountains, fertile valleys, beautiful enclosures, hanging woods, steep precipices, tremendous rocks, winding streams, and beautiful cascades. The whole line is a perpetual hill and dale, thickly strewed with all these romantic glories: literally speaking, you do not move one hundred yards without being struck with continual waterfalls. This is a ride well worth a thousand miles travelling!"

Notwithstanding the natural beauties of the ride here referred to, there are no gentlemen's seats or mansions except one or two of a third-rate class; so that art has not contributed much towards rendering these scenes enchanting. Probably there being but one easy approach to Teesdale, by which the inhabitants have an opportunity of reaching a tolerable market, may have operated as a principal cause against its becoming the summer residence of a few genteel families. A considerable portion of the moorland and hills lying between this valley and Weardale has, at some early period, been forested, and it still retains the name of Teesdale Forest.

About four miles below Bernard Castle, where this river washes the ruinous walls of the once stronghold that lends its name to the present market-town, the Greta, a considerable stream flowing from the west, and having its source among the wilds of Stanemoor, falls into the Tees. The streams unite near Rokeby, the vicinity of which was immortalised in song something more than twenty years ago; and although the scenery in the neighbourhood from which Sir Walter Scott sketched his poem of 'Rokeby' is neither particularly sublime or romantic, it is hardly surpassed in loveliness throughout the entire length of the Tees. The North Road (the western one) from London to Carlisle, and thence to Glasgow or Edinburgh, passes through the village of Greta Bridge. It is in this part of the Vale of the Tees that the moors and uplands recede farther to the right; and from hence the vale opens out into a wide extent of country. On the left or Durham side the country is no longer waste or mountainous, though here and there somewhat hilly; while eastward, at the distance of scarcely three miles, is the pretty little town of Standrop, adjoining which is the extensive park containing that splendid baronial mansion Raby Castle. But neither Raby, nor Streatham Castle, which lies between it and the Tees, is considered as coming, properly speaking, within the limits of the valley attached to that river.

Following the course of the river, we first pass the village of Winston, and then Gainford, the fertility of the country around the latter being rarely equalled; and presently afterwards the two Conscliffes—one on each side the river; and although the country around them is neither hilly nor broken, the name clearly implies a rocky locality,—and such really being the case, for in several places rocks and cliffs of fantastic shapes overlook the deep pools and eddies in this part of the river. All along this section of the valley, which has now opened out into a fine grazing country (though intermixed with lands under tillage), finer specimens of cattle—the Durham short-horns—are nowhere to be met with. In fact the Vale of the Tees is the district where a few spirited farmers effected such wonders in the breed of this particular sort of cattle. Before the river reaches the pretty

village of Croft, the interesting town of Darlington is passed, lying north-east about two miles. At Croft, the Great North Road from London to Edinburgh crosses the Tees; as also does the North of England railroad now progressing towards completion, the *terminus* (for the present) will be a shorter distance from Darlington, and in connection with the railroad from thence to Stockton.

Presently, after passing Croft, that fine agricultural district on the Yorkshire side of the river, called Cleveland, begins; and although there are no precise limits assigned to it, it is generally considered as stretching southward to North Alterton, and probably to Thirsk, or farther; and towards the south-east it is only bounded by the range of bleak moorlands extending from the sea westward far into the interior. It is somewhat remarkable, that the family of Vane derive no fewer than three titles from the Vale of Tees, namely, Duke of Cleveland, Earl of Darlington, and Lord Bernard.

The Tees, after continuing its general course (east inclining to the south), its channel becomes very crooked, diverging occasionally towards every point in the compass; so that were it navigable here (which is not the case), it would afford but an exceedingly circuitous navigation. In the vicinity of Dinsdale and Middleton-one-row (5 miles from Darlington) are spas, which of late years have attracted much company. At the small market-town of Yarm (4½ miles from Stockton) the influence of the tide is first perceptible, from whence it is navigable by boats to the port of Stockton-upon-Tees, which is not only a beautiful little compact town, but is frequented by many vessels, although it has a river navigation of at least 12 or 15 miles. But owing to the crookedness of the river, a few years ago a railway was constructed to a place lower down called Middlesborough, where a smart-looking little town has sprung up, and where the larger ships load and unload. Another railroad brings down coals from the interior of the county to this place; so that coals, as well as merchandise and other articles, have of late been exported from the Tees to the London and other markets.

Probably the most splendid and general view of the broad expanse of the Vale of the Tees is from one of the many elevated points in the range of hills beyond Stokesby, or from the summit of the cone-shaped Roseberry Topping. From thence you look down upon the rich and finely cultivated district of Cleveland in the immediate foreground, with its towns, villages, and neat farm-houses, as well as upon all the Durham side of the vale; also embracing the entire country eastward to the sea, including the peculiarly situated town of Hartlepool, and the sea itself, with its numerous vessels—the dingy-coloured colliers and the white-sailed merchantmen. The various windings of the river may be distinctly traced as it sweeps gently down from the vicinity of Darlington; and farther still it may in several places be seen, like a bright silver thread, even to the neighbourhood of the moorlands, from which it escapes near Bernard Castle. Throughout this whole extent, when the atmosphere is bright and clear, to the eye that is familiar with all the localities of the Vale of the Tees, the seats and mansions of the gentry, which are far from numerous, may be distinctly pointed out.

[To be continued.]

Flowers.—Plants may be multiplied in many ways, by budding, grafting, inarching, by layers, pipings, and cuttings, by suckers, the division of roots and tubers, and by seed; and there are very few species from which by some of these methods an increase cannot be obtained. So easy indeed is the multiplication of plants, and so large a number of new plants can with proper management be raised from one original stock in the course of a year, that the nursery gardeners find it impossible (excepting in rare instances) to maintain a high price for a new flower beyond two or three years: the first year the price of a new flower may be 5*l.*, the second it will be about 30*s.*, the third year not more than 2*s.* 6*d.* The method applicable to the greatest number of plants, and which is successful with ordinary management, is that of cuttings: from the parent plant small slips or cuttings are taken where the wood is not very tender, and, if practicable, at a joint. The cuttings should be planted about two inches apart, in large pots or boxes, and the pots placed in a moderately warm hot-bed, shaded from the sun. In about a fortnight they will strike root, and begin to grow. They should then be gradually hardened, be put, as far as practicable, into separate pots, and removed into the flue-pit, where plenty of air must be given them in the day-time to prevent their damping off, and a fire be lit before frosty nights: the additional security of mats thrown over the frames must be used when the weather is unusually severe. The time of removing the plants from their winter-quarters must depend upon their nature and the climate in which they are to grow. The last week in May or the first in June is the earliest time at which the tenderest will bear a thorough exposure; for one or two previous weeks they should be hardened by gradual exposure to the wind and cold nights, care being taken to protect them with mats if either should be in excess. The cultivation of dahlias is commenced in the second or third week in February, when the roots which have been taken up in the autumn should be put into a hot-bed, kept, as far as practicable, at a uniform heat of 62° to 65°; a little of the earth in the bed should be spread over them, and water liberally given them once a day. The roots will then push out suckers, one from each eye; these should be separated from the bulb: a few fibres of the old root being torn off with them, and being treated after the manner of cuttings, will strike and be ready to plant out at the end of May. It is a fault with gardeners generally that their dahlias flower too late. The first flowers are seldom perfect, and it often happens that the plants have not long reached their prime before they are either pinched by cold nights or perhaps altogether destroyed by frost. It is therefore desirable that the plants should never be checked in the early stages by want of heat or otherwise. Perennial herbaceous plants may be easily multiplied by dividing the roots either in the autumn or in spring. Annuals are principally raised from seed sown in April and May, either upon a hot-bed, from which they must be transplanted, or in the situation in which they are to grow. Sweet-peas and mignonette, nemophylla insignis, poppies, &c., are very shy of being transplanted, unless from pots. Mallows, choriopsis, China and German asters, French and African marigolds, eutoca viscida, nolana prostrata, &c., will be better raised on a hot-bed. New annuals are continually produced: we do not however consider them generally as a desirable class of flowers. There are two methods of arranging flowers with a view to their display—1st, putting each species in a separate bed; 2nd, mixing two or more species in one bed. Each has its merits, and in every garden both should be practised. When flower-beds situated close to each other are to be filled with one species only, it will be requisite to consider the height and colour of the flowers to be planted, that both symmetry and harmony may be preserved. Yellow flowers, especially among those that grow from six inches to two feet in height, are more numerous than flowers of any one other colour, and care must be taken not to plant them in undue proportion. When several species are to be planted in the same bed, the largest bed must be chosen, the tallest species be placed in the middle, and various colours mixed together; sufficient space should be left for each plant to grow freely without interfering with or confusing its branches with those that are next to it. Flowers for the most part like a rich, light, new soil. The spot chosen for a flower-garden should be dry, open to the sun, and sheltered from wind and cold.—*Penny Cyclopædia.*

*** The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

LONDON:—CHARLES KNIGHT & CO., 22, LUDGATE STREET.

Printed by William Clowes and Sons, Stamford Street.